UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/026,353	12/21/2001	Hanan Z. Moller	Moller 1-12/066	8085

29391 7590 03/01/2005

BEUSSE BROWNLEE WOLTER MORA & MAIRE, P. A.
390 NORTH ORANGE AVENUE
SUITE 2500
ORLANDO, FL 32801

EXAMINER	
MATTHEW, AARON D	

ART UNIT	PAPER NUMBER
2114	

DATE MAILED: 03/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/026,353	MOLLER ET AL.	
	Examiner	Art Unit	
	Aaron D Matthew	2114	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10/18/2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 October 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bass, (U.S. 3,920,975), and further in view of Abdelnour et al, (U.S. 6,035,416).

Bass and Abdelnour et al are considered to be analogous art because they both teach improvements in network reliability using redundantly configured primary and backup devices. Furthermore, both references teach a method in which a primary device is monitored remotely for faults, said method including a step in which the primary device is replaced with the backup device in response to a control signal from the remote monitoring device if a fault is detected.

Regarding claim 1, Bass discloses a fault tolerant system having a primary device, at least one redundant device and a remote controller, (note col. 3, lines 30-34), for monitoring the status of the devices and providing a control signal, (see col. 3, lines 38-40), to switch from the primary device to the redundant device upon detection of

a failure in the primary device. Said system includes a method of determining validity of the control signal comprising:

- Sending a first signal having a predetermined varying characteristic, (see col. 8, lines 46-53), from the remote controller; and
- Sending a second signal having the predetermined varying characteristic from the remote controller upon detection of a failure of the primary device.

As shown on col. 10, lines 20-31, the control signals sent from the controller comprise a command digital word with preamble and address bits. The control signals are sent to a command decoder located in each terminal controller. The command decoder then routes the control bits to their intended destinations, (see col. 9, lines 7-11). Thus, a first control signal would be sent with address bits corresponding to the primary device, and a second control signal would be sent with address bits corresponding to the backup device. The command signal for controlling which of the primary or backup devices is to be used is applied to a digital switch in the terminal controller, (see col. 9, lines 17-20).

Bass fails to teach that the control signals are sent directly to at least the primary device, and fails to teach that the first and second signals have different predetermined varying characteristics.

Abdelnour et al discloses a method in which a primary and backup device are both peripherally and self-monitored for a suspected fault condition, (see Abstract). Each

device is provided with three inputs that determine whether or not the device should be active, (note col. 4, lines 5-17). Two of these inputs are configured to receive a signal with a predetermined varying characteristic arranged to convey which controller is to be active, (see col. 4, lines 40-42). Thus, Abdelnour et al discloses a method of determining validity of a control signal comprising continually sending a first signal having a predetermined varying characteristic to at least the primary device from a remote controller, (note col. 4, lines 12-14 in which controller B acts as a remote controller for controller A), and sending a second signal having a different varying characteristic to at least the primary device from a remote controller upon detection of a failure of the primary device, (note col. 4, lines 20-32).

As shown by Abdelnour et al, using a control signal with a predetermined varying characteristic arranged to convey binary information, (see again, col. 4, lines 40-42), improves reliability in a fault tolerant system by facilitating the detection of a fault in a device when a steady-state control signal is detected, (note col. 5, lines 51-52, and col. 3, lines 37-40). One of ordinary skill in the art at the time of applicant's invention would have considered it obvious and advantageous to improve reliability in the fault tolerant system disclosed in Bass by using control signals of different predetermined varying characteristics to convey binary information. Moreover, one of ordinary skill in the art would clearly recognize that the switching logic and circuitry for the redundant devices could be located within the devices, as disclosed in Abdelnour et

al, and would be advantageous in reducing the complexity in a system reliant on external switching circuitry.

Regarding claims 2-4, see col. 2, lines 18-23 in Abdelnour et al, which discloses that the varying characteristic taught by Abdelnour et al comprises a signal frequency that may be either pulsing or oscillating. One of ordinary skill in the art would clearly recognize that such signals comprise continuous wave frequencies and a selected number of signals per unit of time.

Regarding claim 5, note col. 9, lines 23-34 in Bass, which discloses a receiver associated with the at least one device that is responsive to the first signal for acknowledging receipt thereof to the remote controller.

Response to Arguments

2. The amendments to the specification, drawings and claims, discussed on page 5, are accepted by the examiner, and the respective objections are hereby withdrawn.

3. The amendments to the claims regarding the 35 U.S.C. 112, second paragraph, rejections, see page 5, are accepted by the examiner, and the respective rejections are hereby withdrawn.

4. Applicant's arguments, see pages 5-8, filed 10/18/2004, regarding rejections under 35 U.S.C. 103, have been fully considered but they are not persuasive.

On page 6, applicant argues that the command words taught in Bass, "can be sent at any time and there is no indication that there is a continuous transmission of these signals." The examiner agrees with this statement, however, please note that the examiner also indicated, in the previous rejection, that Abdelnour teaches a method of determining validity of a control signal comprising continually sending, (see col. 5, lines 47-52), a first signal having a predetermined varying characteristic to at least the primary device from a remote controller, (note col. 4, lines 12-14 in which controller B acts as a remote controller for controller A). As indicated above, one of ordinary skill in the art would have been motivated to include the step of continually sending said first signal, as taught in Abdelnour, with the method of Bass, in order to

improve reliability in the fault tolerant system by facilitating the detection of a fault in a device when a steady-state control signal is detected.

Applicant further argues that Bass does not indicate that said command word signals, "have some predetermined varying characteristic." The examiner respectfully disagrees. It has already been shown that the first and second signals are disclosed in Bass as having a predetermined varying characteristic, (see col. 8, lines 46-53). This is also evident in applicant's further remarks, that the command word signals, "are merely recited as digital signals which are encoded using a carrier signal frequency," that, "there is no indication that the carrier signal frequency is the signal that is used for the command or information," and, that, "the carrier signal frequency is simply a medium for transmission of the digital signals." In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the feature upon which applicant relies (i.e., that the carrier signal frequency is the signal that is used for the command or information) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

At the bottom of page 6, applicant argues that, "there is no indication that the command signals that affect the switchover are automatic as described in applicant's specification using different frequency signals to indicate to the remote controllers

that it needs to switch." In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., that the command signals that affect the switchover are automatic) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

On page 7, applicant argues that, regarding Abdelnour, "there is no indication that a remote device is sending signals to these controllers to determine which of the controllers is the primary and which is the backup or which will be used at any one time." In making the combination of Abdelnour with Bass, the examiner interpreted controller B as a remote device continually sending a first or second signal, (B_VOTE 116), having differing predetermined varying characteristics, (see col. 4, lines 40-42 and col. 5, lines 47-52), to at least the primary device (controller A).

In response to applicant's argument, on page 8, that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., using different types of control signals to implement a remote control of two independent primary and backup devices using a signal having different varying characteristics so that the remote devices can identify those signals even in the situation in which a signal line becomes faulted) are not recited in the

rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant further argues that, "it is not believed that the patent by Abdelnour et al. teaches or suggests the remote control fault tolerant system as set forth in applicant's claims." In response to applicant's arguments against the references individually, see pages 7-8, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Please refer to the rejection made above in reference to claim 1, wherein the examiner has indicated why it is believed that the combination of Abdelnour with Bass meets all limitations set forth within the claim.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron D Matthew whose telephone number is (571) 272-3662. The examiner can normally be reached on Mon-Fri, from 8:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert W Beausoliel can be reached on (571) 272-3645. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aaron D Matthew

Examiner
Art Unit 2114

ADM

Bryce P. Bonzo
Primary Examiner
AU 2114